

**DERWENT-** 1993-297639**ACC-NO:****DERWENT-** 199908**WEEK:***COPYRIGHT 1999 DERWENT INFORMATION LTD***TITLE:** Shrinkable polyester film for labels or packaging - is prepd. by stretching co-polyester of di:carboxylic acid comprising terephthalic acid, dimer acid, and di:ol**PATENT-ASSIGNEE:** KANEBO LTD[KANE]**PRIORITY-DATA:** 1991JP-0282150 (October 1, 1991)**PATENT-FAMILY:****PUB-NO      PUB-DATE      LANGUAGE PAGES MAIN-IPC**

JP 05208447 A August 20, 1993 N/A      004      B29C 061/06

JP 2848725 B2 January 20, 1999 N/A      005      C08J 005/18

**APPLICATION-DATA:****PUB-NO      APPL-DESCRIPTOR APPL-NO      APPL-DATE**

JP 05208447A N/A      1991JP-0282150 October 1, 1991

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**INT-CL**      B29C055/02, B29C061/06, B29K067:00, B29L007:00, C08G063/12, C08J005/18,  
**(IPC):**      C08L067:00**ABSTRACTED-PUB-NO:** JP 05208447A**BASIC-ABSTRACT:**

Film is prepd. by stretching copolyester film comprising dicarboxylic acid components comprising 60-94 mol % terephthalic acid, 1-10 mol. % dimer acid and 5-30 mol % other dicarboxylic acid and diol component(s).

**USE/ADVANTAGE** - The copolyester film has high and uniform shrinkability at lower temps. and high mechanical strength. It is used as shrinkable labels or shrinkable packing sheet for foods.

In an example, the dimer acid is prepd. by dimerising unsatd. fatty acid(s) (e.g, oleic, elaidic, cetoleic, erucidic, brassidic or linoleic acid). The other dicarboxylic acid is e.g, adipic, oxalic, malonic, succinic, azelaic, sebacic, isophthalic, phthalic, etc., and pref. isophthalic acid for enhancing the shrinkability. The diol is e.g, ethylene glycol, propylene glycol, tetramethylene glycol, neopentyl glycol, etc. The copolyester contains opt. other comonomer (e.g, p-oxybenzoic acid, p-oxyethoxybenzoic acid, benzoic acid, benzylbenzoic acid, methoxypolyalkylene glycol, glycerol, etc.) and is blended opt with other polyester, other polymer and 0.005-0.5 w.t % additives (eg., extenal inert particles of kaoline, clay, etc.). The copolymer has an intrinsic viscosity of at least 0.5. Its insufficient viscosity degrades the

mechanical strength of the film. The shrinkable film is prepd. by extruding or calendering the copolyester to provide its unstretched film and stretching monoaxially or biaxially to draw ratio(s) of 2.0-5.0 to provide a film having a thickness of 20-50 microns.

**CHOSEN-DRAWING:** Dwg.0/0

**DERWENT-CLASS:** A23 A94

**CPI-CODES:** A05-E01C; A09-A01A; A11-B02A; A12-P04; A12-S06B;

**PAT-NO:** JP405305667A  
**DOCUMENT-IDENTIFIER:** JP 05305667 A  
**TITLE:** POLYESTER SHRINK FILM  
**PUBN-DATE:** November 19, 1993

**INVENTOR-INFORMATION:**

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**INT-CL (IPC):** B29C061/06 , B29C055/02 , C08G063/181 , C08J005/18

**US-CL-CURRENT:** 425/66

**ABSTRACT:**

**PURPOSE:** To enhance low temp. heat shrinkage characteristics, solvent adhesiveness or tear resistance by forming a film from copolyester containing terephthalic acid, isophthalic acid, ethylene glycol and a propane diol derivative represented by a specific formula to stretch the same.

**CONSTITUTION:** A shrink film used in a shrink label or food packing is formed by stretching a film formed from specific copolyester. Specific copolyester contains 95-70mol% of terephthalic acid and 5-30mol% of isophthalic acid as dicarboxylic acid components and contains 90-50mol% of ethylene glycol and 5-20mol% of diethylene glycol and/or tetramethylene glycol as diol components and further contains 5-30mol% of a propane diol derivative represented by formula (wherein R1 is a 1-6C straight chain or branched chain saturated hydrocarbon group and R2 is a 2-6C straight chain or branched chain saturated hydrocarbon group).

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